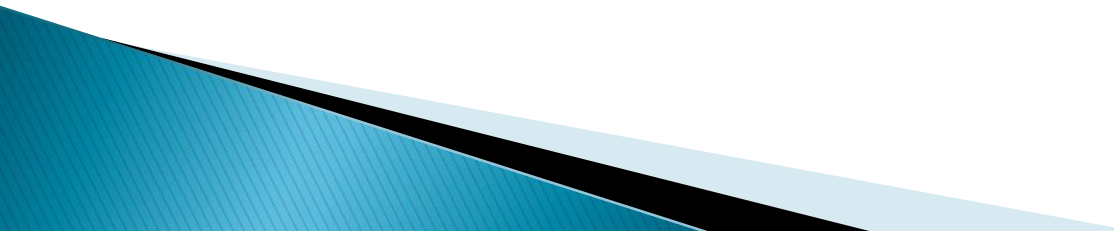




PCBs in NYC Schools

U.S. Environmental Protection Agency, Region 2

Speakers for Tonight:

- ▶ Wanda Ayala, Community Involvement Coordinator, EPA Region 2
 - ▶ Jim Haklar, Regional PCB Coordinator, EPA Region 2
 - ▶ Representatives for NYC
- 

Why are we having a public meeting?

- ▶ To receive your comments on NYC's report to address PCBs in its schools.
- ▶ If you have comments that are not raised at tonight's meeting, they can be sent to:

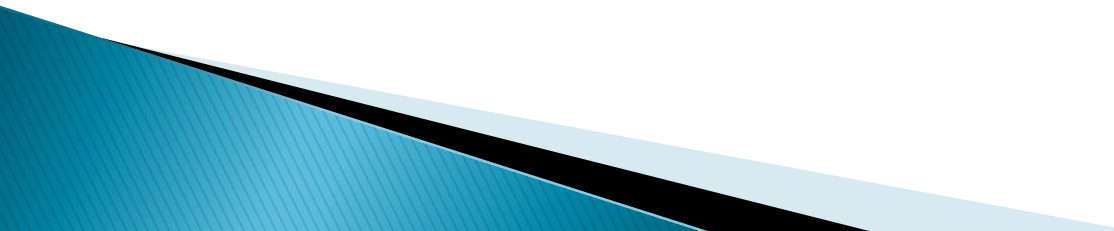
James S. Haklar
U.S. Environmental Protection Agency
2890 Woodbridge Avenue, Building 10
Edison, New Jersey 08837

or email your comments to:

PCBsPreferredRemedy.Region2@epa.gov

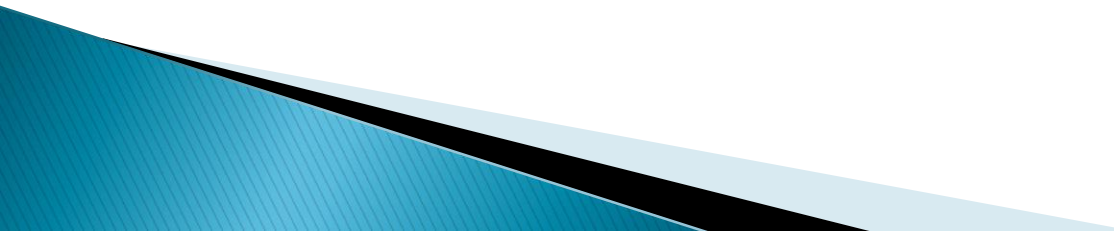
Some Background on the Issue

PCBs:

- ▶ Are man-made chemicals that are no longer manufactured.
 - ▶ Were widely used in industry, especially in building materials and electrical applications such as lighting.
 - ▶ Are hazardous and potentially cancer-causing.
- 

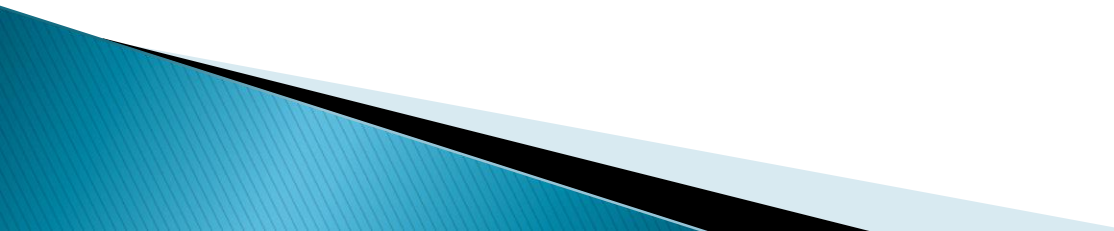
Some Background on the Issue

PCBs in NYC Schools:

- ▶ Initially found in the building caulk at several schools by private individuals.
 - ▶ The results were provided to EPA and to the New York Daily News.
 - ▶ EPA entered into an agreement with NYC to address the PCBs.
- 

Some Background on the Issue

EPA's Agreement with NYC:

- ▶ Signed by EPA and NYC in 2010.
 - ▶ Required the city to perform a study of PCBs in 5 older schools (called a “Pilot Study”).
 - ▶ Based on the results of the Pilot Study, NYC prepared a report that recommends a city-wide approach to deal with the PCBs (called a “Preferred Citywide Remedy”).
- 



PILOT STUDY TO ADDRESS PCB CAULK IN NEW YORK CITY SCHOOL BUILDINGS

**USEPA Public Meetings
– Preferred Citywide
Remedy (May/June
2014)**



**Department of
Education**

Carmen Fariña, Chancellor

Presentation Overview

- Introduction
- Background- Pilot Study to Address PCB Caulk
- Sampling Results Summary
- Preferred Citywide Remedy
- Long Term Monitoring

PCBs in General

- 1.4 billion pounds of PCBs produced in U.S. between 1925 and 1978.
- Used in consumer products, electrical equipment, and building materials throughout the entire country.
- Beginning in 1950, caulk containing PCBs was used in constructing and renovating buildings throughout the entire country.
- Congress banned the manufacture of PCBs in 1978.
- EPA issued its first national guidance on PCBs in caulk in September 2009.

Pilot Study Background

- The City reached an agreement with the EPA to conduct a pilot study of five New York City school buildings to further evaluate the risk and management of PCB Caulk.
 - The ultimate goal of the Pilot Study is to develop a citywide approach for assessing and managing PCB Caulk in schools built between 1950 and 1978
- First and only study in the U.S. of this scope and magnitude.

Pilot Study Background

- **Remedial Alternatives Evaluated**
 - Encapsulation of PCB Caulk
 - Removal and Replacement of PCB Caulk
 - Patch and Repair of PCB Caulk
 - Removal of Windows with PCB Caulk
 - Removal of Light Fixtures with PCB Ballasts – Added in 2011

Pilot Study Background

- **2010 - 2011 Pilot Study Remedial Work:**
 - PS 178X/176X – Patch and Repair of PCB Caulk
 - PS 199M – Remove and Replace PCB Caulk
 - PS 309K – Encapsulate PCB Caulk
 - PS 3R – Light Fixture PCB Ballast Removal
 - PS183Q – Window Replacement
- PCB light fixtures were ultimately removed from all 5 Pilot Schools, due to magnitude of impact of this remedy.

Pilot Study Background

Pre- and Post-Remedial PCB Testing

- Pre-remedial inspections and baseline sampling of PCBs in air, dust and soil.
- Post-remedial PCB air and dust wipe sampling from same locations to evaluate remedial alternatives.

Pilot Study PCB Wipe Samples

- Pre and post-remediation surface dust wipe samples were collected in all five Pilot Schools. Over 430 dust wipe samples were collected and analyzed.
- All locations sampled were below EPA guidance levels.*
- **Routine housekeeping practices are sufficient to keep PCBs in surface dust below EPA guidance levels.**

*There was one initial exception, which was below EPA guidance levels when re-sampled.

Pilot Study PCB Air Samples

- Pre- and post-remediation air samples were collected in all five Pilot Schools. The most recent samples at the five Pilot Schools were below EPA guidance levels.
- Over 1,100 PCB air samples have been collected as part of the pilot study.
- **The greatest reductions in airborne PCB concentrations were seen following removal of old light fixture ballasts**

Discussion of Findings

- PCBs in buildings is a complex problem.
- PCB light fixtures should be addressed first.
- PCB caulk needs to be managed and assessed on an ongoing basis.
- PCBs may also be present in other building materials and furnishings – potential secondary sources.
- More research is needed.

NYC PCB Light Fixture Removal Project

- **Remove and Replace all PCB Lighting ballasts throughout the entire school system**
- T-12 light fixtures replaced in 238 school buildings
- Light replacement projects currently in progress in 173 school buildings.
- Completion Date: December 31, 2016

Preferred Citywide Remedy

- PCB Light Fixture Removal Program
- Protocol to inspect and respond to ballast issues
- Implement Best Management Practices
 - Inspect and remediate caulk as necessary, e.g. remove and replace, patch and repair, encapsulation
 - Inspect and maintain ventilation systems per design
- Remove caulk during Capital Improvement Program (CIP) Projects under EPA-approved construction protocols.
- Evaluate, excavate & replace soil associated with CIP
- Long-Term Monitoring Program in Pilot Schools.
- Additional Studies to determine next steps.

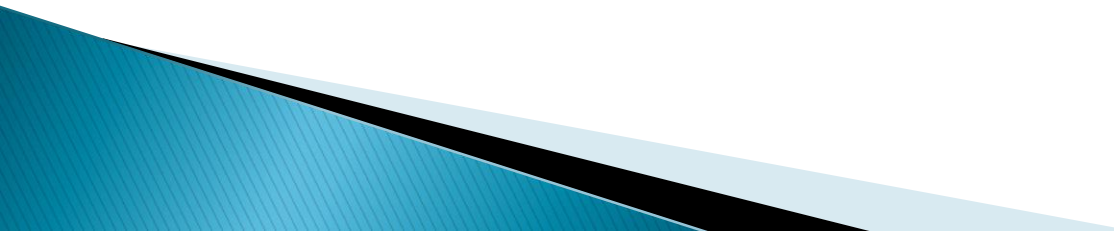
Pilot Study Long Term Monitoring Program

Annual Sampling:

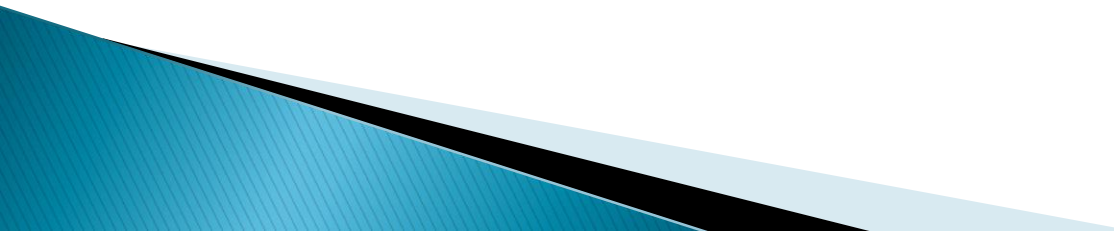
- Air sampling (heating season & non-heating season)
- Bulk sampling of remediated caulk
- Wipe sampling of encapsulated caulk

Some Background on the Issue

EPA's Agreement with NYC:

- ▶ Required EPA to have technical experts review the city's work (the review is called a "Peer Review").
 - ▶ Also required EPA to hold a public meeting and receive comments on the Preferred Citywide Remedy.
- 

Some Points About the Peer Review

- ▶ The Peer Review was independent. EPA's consultant selected three reviewers who had no contact with EPA on the peer review.
 - ▶ Two reviewers were from private industry and one was from academia.
 - ▶ EPA provided its consultant with a series of questions for the reviewers to answer.
- 

More Points About the Peer Review

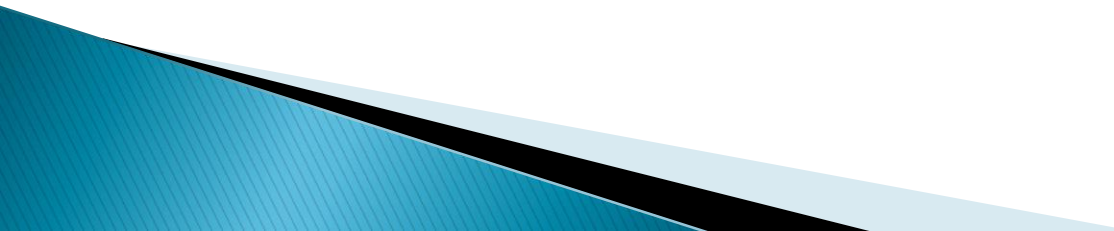
- ▶ EPA's consultant assembled reviewers' responses into a single report (called the Peer Review Report).
- ▶ After reviewing the Peer Review Report, EPA summarized its perspectives on the findings of the Peer Review.
- ▶ Both documents can be found at:

<http://www.epa.gov/Region2/pcbs/index.html>



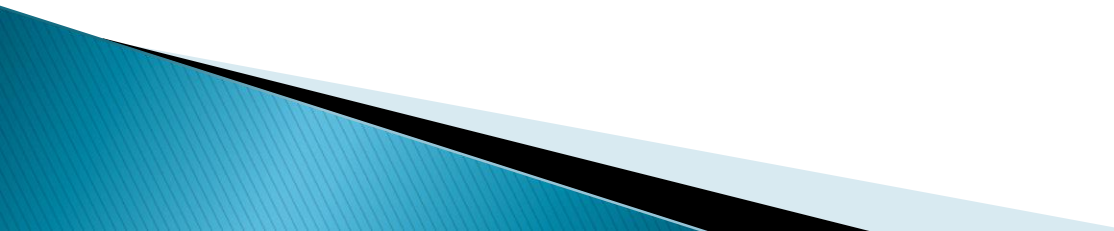
Major Findings of the Peer Review

The City's Report

- ▶ The City's report is comprehensive.
 - ▶ Appropriate methods were used during the investigation/field work.
- 

The Major Findings of the Peer Review

Clearance Testing in the City's Re-occupancy Protocols for Failures of PCB Light Ballasts

- ▶ When PCB ballasts smoke or leak, the City wipes surfaces inside the affected rooms and analyzes these wipes for PCBs. This is called wipe sampling.
 - ▶ Some of the peer reviewers believe that wipe sampling alone is not adequate.
- 

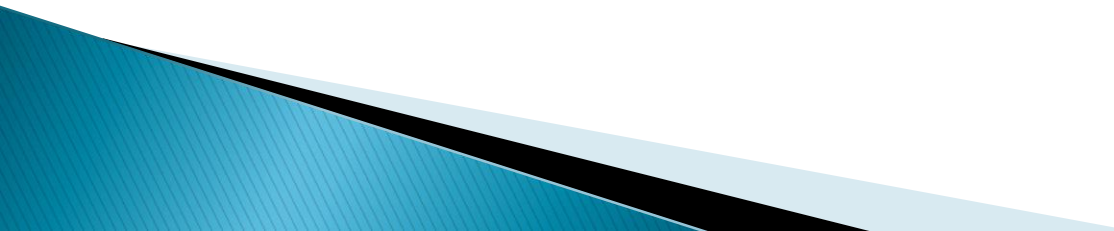
The Major Findings of the Peer Review

Other Approaches for Addressing PCB Caulk

- ▶ The peer reviewers recommend barriers (such as using plastic tape, gypsum board, or aluminum strips) or chemically treating the caulk to reduce the amount of PCBs.

The Major Findings of the Peer Review

Prioritizing Schools to Address PCBs

- ▶ Some of the peer reviewers believe proactively addressing PCBs would significantly reduce exposure.
 - ▶ All three reviewers also believe air sampling would be an effective component of prioritizing schools.
- 

The Major Findings of the Peer Review

Assessing and Optimizing Ventilation in the Schools

- ▶ All three peer reviewers recommend that ventilation be optimized to minimize levels of PCBs in the air.

The Major Findings of the Peer Review

Housekeeping at the Schools (Best Management Practices)

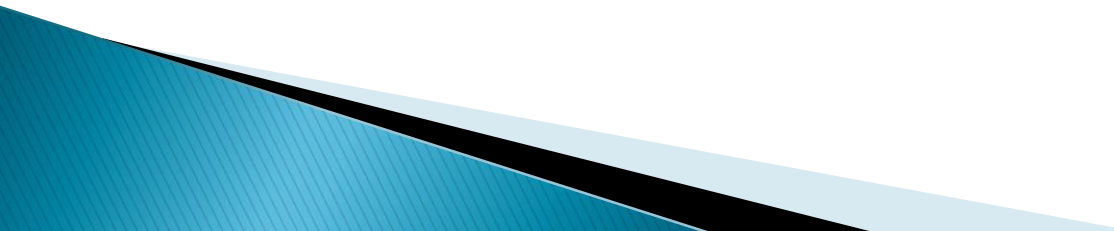
- ▶ The peer reviewers were not consistent in their recommendations to focus on either intact or deteriorated caulk (or both).

The Major Findings of the Peer Review


Evaluating Soil at Schools with PCBs in the Outside Caulk

- ▶ The peer reviewers do not believe that proactively evaluating PCBs in soil will significantly reduce exposure.

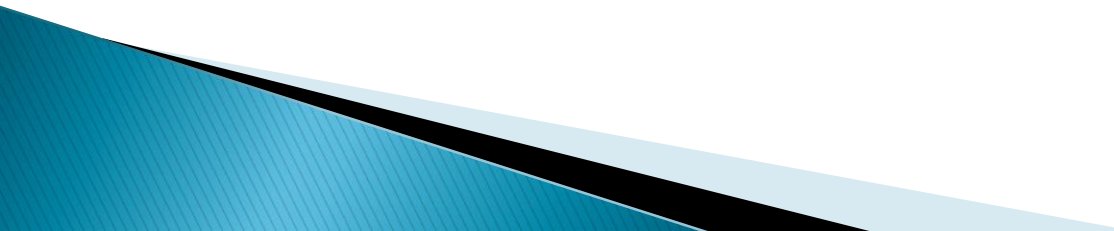
Next Steps:

- ▶ EPA will take public comments until June 30, 2014
 - ▶ Based on the public comments and the peer review responses, EPA may incorporate revisions to the Preferred Citywide Remedy.
- 

Next Steps:

- ▶ The Preferred Citywide Remedy recommends additional research to address knowledge gaps. EPA has suggested to NYC that the research include:
 - Testing of different sampling methods for indoor air and caulk; and
 - Evaluating how much the caulk and other building materials contribute to the PCB concentrations in the indoor air.
- 

Points to Remember:

- ▶ A lot of work was performed under the Pilot Study and valuable scientific information was obtained.
 - ▶ We have a better understanding of where PCBs can be present in a school and how they can get into the indoor air which is our main concern.
 - ▶ By removing the PCB-containing light fixtures, NYC is addressing a major source of PCBs in its schools.
 - ▶ Your comments matter!
- 

To Recap:

Preferred Citywide Remedy:

- PCB Light Fixture Removal Program
- Protocol to inspect and respond to ballast issues
- Implement Best Management Practices
 - Inspect and remediate caulk as necessary, e.g. remove and replace, patch and repair, encapsulation
 - Inspect and maintain ventilation systems per design
- Remove caulk during Capital Improvement Program (CIP) Projects under EPA-approved construction protocols.
- Evaluate, excavate & replace soil associated with CIP
- Long-Term Monitoring Program in Pilot Schools.
- Additional Studies to determine next steps.

Send your comments to:

James S. Haklar
U.S. Environmental Protection Agency
2890 Woodbridge Avenue, Building 10
Edison, New Jersey 08837

Or using email:

PCBsPreferredRemedy.Region2@epa.gov



Questions and Comments